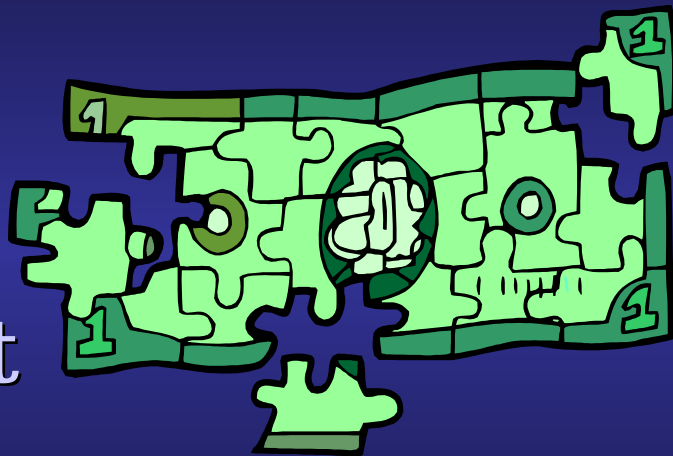


# ***NED COSTS***

And Other  
Bewilderment  
s  
Of  
COE Planning



***So what's the  
confusion?***

***Aren't all costs alike?***

***Actually,***

***NO***

***NOT IN THE CORPS OF ENGINEERS  
AND IN OTHER FEDERAL  
AGENCIES***

# ***The National Perspective***

**Based on Principles and  
Guidelines**

The ***Federal Objective*** of water  
and related land resources project  
planning:

Contribute to National Economic  
Development (NED) consistent with  
protecting the Nation's environment,  
pursuant to ...statutes, ....

# ***Contributions to NED***

Contributions to NED are increases in the

***net value*** of the national output of goods and services....

Contributions to NED are the ***direct net benefits*** that accrue in the planning area and the rest of the Nation.

Contributions to NED include increases in the net value of those goods and services that are marketed, and also of those that may not be

# ***Economic Efficiency***

**Economic Benefits -  
Economic Costs equals  
Net Economic Benefits**

***Goal for Federal Resource  
Planning***

**Maximize Net Economic  
Benefits**

# ***Source of confusion***

**Cost concepts used for efficiency decisions are frequently confused with cost concepts for implementation.**

*Decisions based on  
efficiency are based on  
**ECONOMIC** costs*

*Decisions based on  
implementation are  
based on **FINANCIAL**  
costs*



# ***Economic Costs***

**Opportunity costs—value of opportunities forgone**

**In the Corps,  
these costs are needed for  
the economic analysis  
(NED Costs).**

# ***Economic Costs are Opportunity Costs***

The REAL measure of costs is opportunity cost, the value of that which is forgone when a choice is made.

# ***When do we use NED costs?***

**In the plan formulation process  
and**

**In the economic evaluation of  
alternative  
plans**

**After that, NED costs are of secondary  
importance to implementation costs.**

# ***Opportunity Cost as Resource Cost***

**Things that have no apparent dollar cost**

- ▮ Donated land**
- ▮ Land owned by the non-Federal sponsor**

***Shifts focus of cost considerations away from exchange of currency to use of resources***

# ***Components of Opportunity Costs***

***Explicit Costs***--Monetary Costs  
Out-of-pocket expenditures

***Implicit Costs***—imputed/noncash costs

Does not show up in accounting records

# ***What constitutes an NED cost?***

**Costs incurred as a direct or indirect  
result of the project are NED  
project costs**

**Replacement in kind?—yes, NED cost**

**Betterments?—no, not project related**



# ***BRIDGE REPLACEMENT POLICY DECISION***

Not a betterment if only rebuilt to  
today's engineering design  
standards



# ***Types of NED Costs***

**Implementation**--necessary to implement (explicit)

**Other Direct Costs**—costs of resources directly required for a project or a plan but for which no implementation outlays are made (implicit)

**Associated Costs**—local service facilities, necessary to realize benefits (private, non-Federal costs)



# ***Implementation costs— necessary to implement project (explicit costs)***

- PED costs
- Construction costs
- Construction contingency costs
- OMRR&R costs
- Fish & Wildlife habitat mitigation
- Historical and archeological mitigation and data recovery
- Lands, easements, ROW's including dredged material placement areas
- Water and mineral rights

# ***PED Costs as NED Costs***

**“ The costs are the direct cost for investigations, field surveys, planning, design, and preparation of specifications and construction drawings for structural and nonstructural project measures.” P&G, p. 97**

# ***Construction Costs as NED Costs***

- **Construction cost**
- **Construction contingency costs**
- **Administrative Services Costs (S&A)**

# ***OMRR&R Costs as NED Costs***

## **Operation and Maintenance**

—“Current value of materials, equipment, services, and facilities needed to operate the project and make repairs and replacements necessary to maintain project measures in sound operating condition, during the period of analysis.” P&G, p.99

# ***Relocation as an NED Cost***

## ***2 Kinds of Relocation Costs***

- Relocation of highways, railroads, pipelines, and utilities
- Requirements of PL 91-646, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

***NED Costs based on***

# ***Fish and Wildlife Habitat Mitigation as NED Cost***

**Includes costs of protecting,  
restoring, and enhancing fish  
and wildlife habitat**

**As well as mitigating for  
losses**

***Includes Beneficial Uses of***

# ***Other Implementation Costs as NED Costs***

- **Historical and Archeological Salvage Operations Costs**
- **Land, Water, and Mineral Rights Costs**
- **Lands, Easements, Rights-of-Way**

# ***Other Direct Costs as NED Costs***

- IDC—Interest During Construction
- Value of donated land
- Aids to Navigation
- Uncompensated NED losses
- Other negative externalities  
***Implicit/Non-Monetary***



# ***Interest during Construction as an NED Cost***

- An implicit cost, no one is going to pay the IDC calculated
- Accounts for the cost of capital incurred during the construction period, prior to the base year, the beginning of the project life.

# ***Calculate IDC on***

- **PED Studies**
- **Implementation Costs  
as they occur**
- **Land as consumed for  
project**

# ***Value of Donated Land as an NED Cost***

**Remember , this is a  
RESOURCE cost, an  
opportunity foregone  
and**

**As such represents value  
to society**

# ***Aids to Navigation***

**Buoys, lights, ranges, markers,  
and other devices and  
systems required for safe  
navigation or to achieve  
project benefits**

**Provided by Coast Guard and  
not charged to the project**

# ***Other Direct Costs***

- **Uncompensated NED Losses—**  
not mitigated (i.e., loss of recreational values due to channel modifications)
- **Other negative externalities—**  
implicit costs not compensated (i.e., induced flood damages)

# ***Associated Costs***

- Landside improvements, warehousing and transfer facilities
- Utilities
- Rail spurs, roadways
- Dock improvements and dredging

***Non-Federal or Private Outlays,  
not Cost-Shared***

$$\begin{aligned} \text{NED} \\ \text{Costs} = \sum & \begin{aligned} & \text{Implementation} \\ & \text{Costs} \\ & \text{Other Direct} \\ & \text{Costs} \\ & \text{Associated Costs} \end{aligned} \end{aligned}$$

# ***References***

- **Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G), Mar 83**
- **Planning Guidance Notebook, ER 1105-2-100, 22 Apr 2000.**
- **National Economic Development Procedures Manual, National Economic Development Costs, IWR Report 93-R-12.**
- **National Economic Development Procedures Manual, Overview Manual for Conducting National Economic Development Analysis, IWR Report 91-R-11.**
- **National Economic Development Procedures Manual, Urban Flood Damage, IWR Report, 88-R-2.**



***Questions?***